Up2UML
The Project and its Benefits

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Introduction

A survey of the programs of IT training providers all over Europe showed that up to the present, trainings for the UML notation are only available in the form of traditional training sessions. This is deplorable especially for the IT sector. Software organizations and software developing departments in companies of all industrial sectors are looking for new and more efficient ways to deliver and perform training. The fact that there already exists a great demand for this kind of training materials and concepts will make it easier to disseminate our projects results.

Moreover, the analysis of a survey with software engineers suggests that effective learning in this area requires Europeanization of the training material & concept, i.e., not a simple translation, but rather an adaptation to the respective cultural and economic conditions in every European country which are quite different. This is in contrast to many training programs for the IT sector which often are adopted as they are from the US and which are only available in English.

Project Goals

Up2UML aimed to achieve the following goals:
- Development of new content and training material
- Development of syllabi for different target groups and training concepts
- Development of innovative training concepts (e.g. distance learning with on-line tutoring, social learning, virtual learning cycles, community of practice)
- Europeanization of content, training material and training concepts including intercultural aspects
- Train-the-trainers (tutors) from different European countries

Results

The development of a pedagogical methodology is based on a business task break down to instantiate some blended learning activities to achieve pedagogical objectives. [1] The methodology is the basis to develop a blended course as well as supporting documents such as a guidebook for facilitators in blended learning.

Guidebooks are a formalized way of describing blended activities. They provide instructions for course facilitators (lecturers/tutors) on how to conduct a course using the available course material. Guidebooks may contain different syllabi based on the same material. In particular, the proportion of self-paced and blended activities may vary as well as the pedagogical approach. [2]

A Delphi study conducted as part of this project highlights the different priorities of learners in SME from the IT sector, compared to learners in SMEs from the tourism industry and large companies. [3] The participants in all five sub-panels agreed on a list of 10 most important features of Blended Learning in SMEs. These can be used as a target group specific checklist for blended learning solutions.

The localized prototypes of the UML 2 course were developed and tested in five countries, Bulgaria, Romania, France, Germany and Ireland. Approximately 600 stakeholders were involved in different stages of the project.

Emerging Topics

There are a number of topics emerging from the various activities and studies and especially the interaction with the users. The use of web 2.0 technologies in blended learning for SMEs, the application of learning styles as indicated in the tool set, as well as the target group specific and highly ignored aspect of motivation in on-line learning [4] for SMEs became very obvious as future research areas.

Related Projects

Adaptive Learning Spaces [5], a project under the Minerva programme complements the results of Up2UML with its focus on advanced concepts and technologies through which lack of (or limited amounts of) face-to-face contact between instructors and learners can be compensated.

The key competencies Europe 2010 [6] involve the confident and critical use of electronic media for work, leisure and communication. Digital literacy or digital competence is the core objective to the Know IT program, a blended learning solution that has been successfully tested against the checklist developed from the results of the Delphi study.

Solution oriented thinking, gathering information, presentation and collaboration using web 2.0 technologies in combination with the learning outcomes, are essential for KESP and produce de facto competences resonant of the type of competencies detailed as key competencies Europe 2010. KESP as well as KnowIT are two new blended learning programs offered to learners in Ireland.

Relevance for ECTEL community

Project assets accessible for the community:
- A **model UML2 course** with syllabi for different target groups in the software industry.
- **Experience with the Europeanization of content, training material and training concepts** including intercultural aspects makes the course deployable in different countries and regions, including the new member states of the EU, particularly Romania and Bulgaria.

Assets available for reuse or future cooperation:
- **Toolset** for a sustainable approach for a responsive learning environment; it aligns a learning styles assessment with a learning methodology, a mapping between learning styles and social media, recommendations in a guidebook for facilitators and a checklist
- **The results of a Delphi study**, including 40 international participants. It investigates the aspects which are considered important by the main stakeholders of blended learning in SMEs, namely learners as well as trainers and providers of blended learning solutions. [7]
- **Contacts from different groups interest in the results and future cooperation.** These include educators in third level education and the professional training sector. A number of e-learning providers were involved in the different studies in the project as well as responsible persons for training in SMEs.

Project partners

References

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